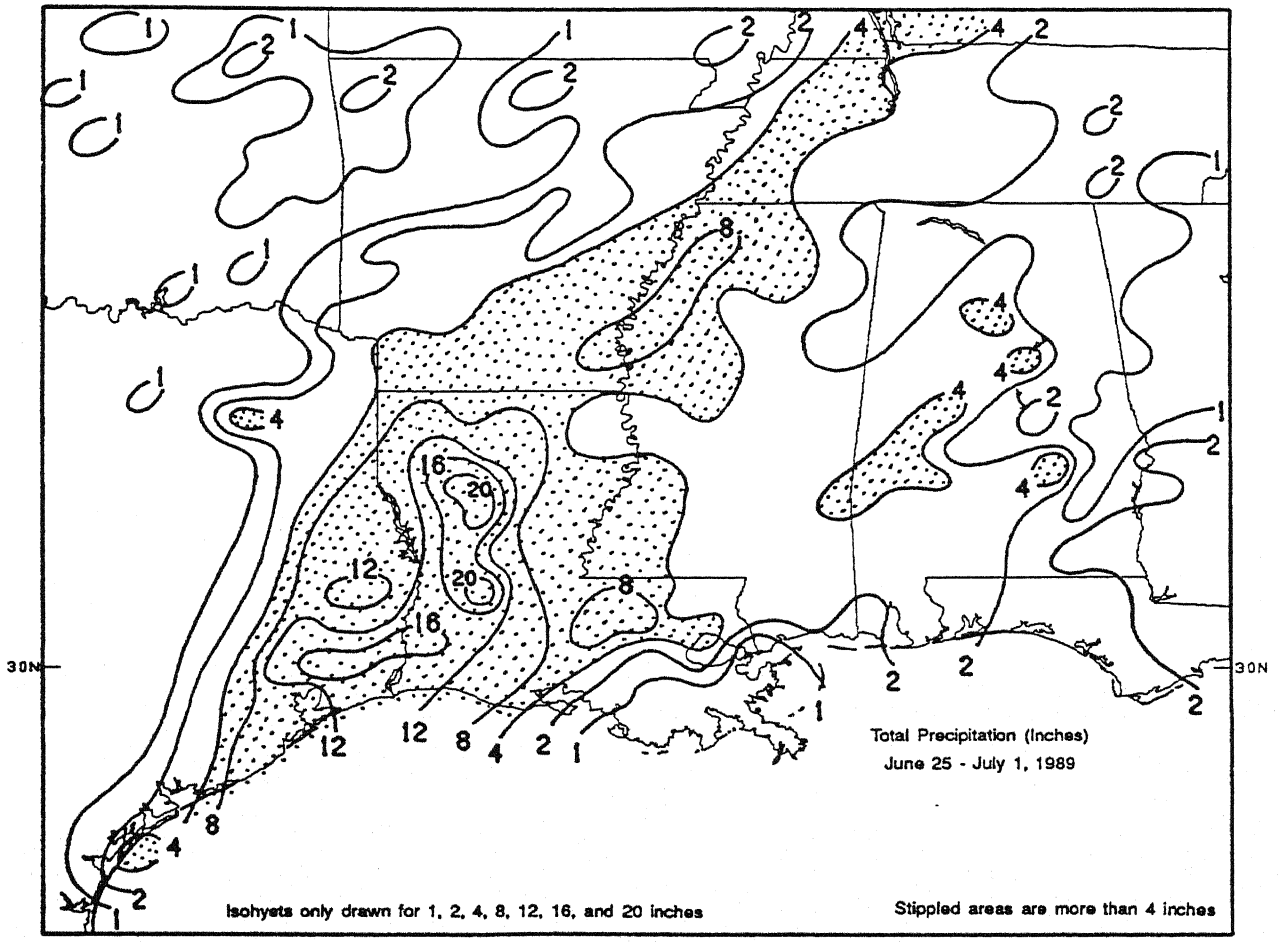
CLIMATE ANALYSIS CENTER

WEEKLY CLIMATE BULLETIN

No. 89/26 **Washington, DC** **July 1, 1989**



EXCESSIVELY WET CONDITIONS CONTINUED FOR THE NINTH CONSECUTIVE WEEK THROUGHOUT MOST OF THE SOUTH AS TROPICAL STORM ALLISON DUMPED UP TO 26.5 INCHES OF RAIN LAST WEEK AND CAUSED SEVERE FLOODING IN EXTREME EASTERN TEXAS, SOUTHERN ARKANSAS, NORTHWESTERN MISSISSIPPI, AND ACROSS MOST OF LOUISIANA.

UNITED STATES DEPAR
NATIONAL OCEANIC AND ATM
NATIONAL WEATHER SERVICE - NA

WEEKLY CLIMATE BULLETIN

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This Bulletin is issued weekly by the Climate Analysis Center and is designed to indicate, in a brief, concise format, current surface climatic conditions in the United States and around the world. The Bulletin contains:

Highlights of major global climatic events and anomalies.
U.S. climatic conditions for the previous week.
U.S. apparent temperatures (summer) or wind chill (winter).
Global two-week temperature anomalies.
Global four-week precipitation anomalies.
Global monthly temperature and precipitation anomalies.
Global three-month precipitation anomalies (once a month).
Global twelve-month precipitation anomalies (every 3 months).
Global temperature anomalies for winter and summer seasons.
Special climate summaries, explanations, etc. (as appropriate).

Most analyses contained in this Bulletin are based on preliminary, unchecked data received at the Center via the Global Telecommunication System. Similar analyses based on final, checked data are likely to differ to some extent from those presented here.

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GLOBAL CLIMATE HIGHLIGHTS

MAJOR CLIMATIC EVENTS AND ANOMALIES AS OF JULY 1, 1989

1. North Central United States:

DRYNESS CONTINUES.

Even with rainfall amounts approaching 50 mm, many areas still have long-term precipitation deficits. Driest conditions were in the Dakotas and Nebraska (see U.S. Weekly Climate Highlights) [15 weeks].

2. Northeastern United States:

WETNESS EASES.

Precipitation totals were generally less than 17 mm as dry conditions brought relief from the very wet weather regime (see U.S. Weekly Climate Highlights) [Ending at 8 weeks].

3. Gulf Coast:

TROPICAL STORM ALLISON BRINGS MORE HEAVY RAINS.

Flooding remained a problem as Tropical Storm Allison dumped over 600 mm of rain on some Gulf Coast stations where the ground has been saturated by persistently wet weather (see U.S. Weekly Climate Highlights) [7 weeks].

4. Ecuador:

STILL WET.

More relatively heavy rains, in excess of 50 mm, occurred across the region [2 weeks].

5. British Isles:

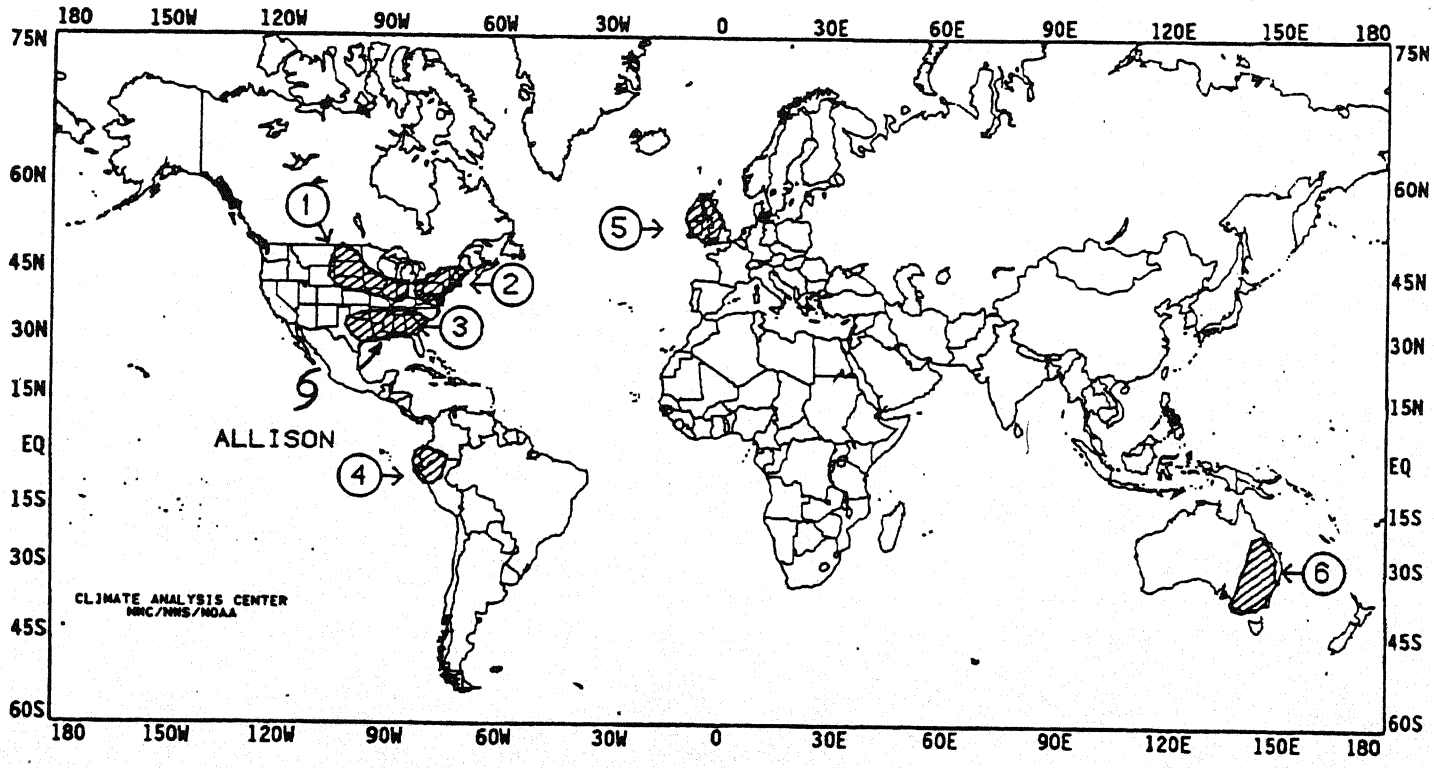
RAINS BRING RELIEF.

Up to 67 mm of precipitation was measured at stations in Great Britain as wet weather eased unusually dry conditions [Ending at 4 weeks].

6. Southeastern Australia:

HEAVY RAIN AREA DIMINISHES.

Precipitation amounts approached 155 mm at coastal stations; however, most inland locations reported little or no rainfall [16 weeks].



Approximate locations of the major anomalies and events described above are shown on this map. See other maps in this Bulletin for current two week temperature anomalies, four week precipitation anomalies, longer term anomalies, and other details.

EXPLANATION

TEXT: Approximate duration of anomalies is in brackets. Precipitation amounts and temperature departures are this week's values.

MAP: Approximate locations of major anomalies and episodic events are shown. See other maps in this bulletin for current two week temperature anomalies, four week precipitation anomalies, long-term anomalies, and other details.

UNITED STATES WEEKLY CLIMATE HIGHLIGHTS

FOR THE WEEK OF JUNE 25 THROUGH JULY 1, 1989.

Copious rainfall, with weekly totals exceeding 26 inches, produced severe flooding across most of southeastern Texas, western Louisiana, southern Arkansas, and northwestern Mississippi in association with Tropical Storm Allison, the first named Atlantic storm of the 1989 hurricane season. Allison, which originated in the Pacific Ocean as Hurricane Cosme, became only the fourth tropical storm or hurricane since 1902 to form in the Pacific Ocean and survive the eastward trek across Mexico before reintensifying to tropical storm or hurricane strength in the Gulf of Mexico. Once Tropical Storm Allison made landfall near the central Texas coast early Monday morning, it weakened and was downgraded to a tropical depression by Tuesday morning. Its remnants, however, drifted slowly and erratically northeastward, triggering torrential showers and thunderstorms, some spawning tornadoes, throughout most of the western Gulf Coast, the Tennessee and lower Mississippi Valleys, and the Southeast during the remainder of the week. Elsewhere, a slow moving cold front in the central Plains generated severe weather early in the week across Kansas and Nebraska as several tornadoes touched down in the latter state. By mid-week, the cold front had progressed southeastward from the Ohio River northeastward to the New England coast, generating strong thunderstorms in parts of the Ohio Valley and the mid-Atlantic. Farther west, thunderstorms formed in the northern Great Plains due to an upper air disturbance. Later in the week, intense thunderstorms broke out over the central Rockies and Plains as one cell over Cheyenne Wells, CO produced wind gusts up to 130 mph and dropped 2.3 inches of rain in half an hour. In the Pacific Northwest, an upper level disturbance anchored off the coast brought light showers to the western halves of Washington and Oregon, while parts of southern and southwestern Florida recorded heavy rains from scattered showers and thunderstorms.

According to the River Forecast Centers, up to 26.50 inches of rain was reported at Winnfield, LA, with lesser amounts (between 8 and 20 inches) occurring around the Houston metropolitan area, the Texas-Louisiana border, across most of central Louisiana, and along the Arkansas-Mississippi border (see front cover). In contrast to the extremely dry conditions of a year ago, some locations in the lower Mississippi Valley (e.g. Shreveport, LA) have already surpassed their normal ANNUAL precipitation during the first half of 1989. Heavy rains were prevalent along most of the Gulf Coast, throughout the Tennessee and lower Mississippi Valleys, the Southeast, the central Great Plains, southern and western Florida, and at scattered stations in the northern Great Plains, upper Midwest, eastern Ohio Valley, central Appalachians, and the northern Cascades (see Table 1). Light to moderate totals were observed along the northern half of the Pacific Coast and throughout most of the eastern two-thirds of the nation. Little or no precipitation fell along the southern half of the Pacific Coast, on most of the Intermountain West, the southern two-thirds of the Rockies, the Rio Grande Valley, the central Great Lakes, from western South Carolina northeastward to the Delmarva Peninsula, and in most of Hawaii and Alaska.

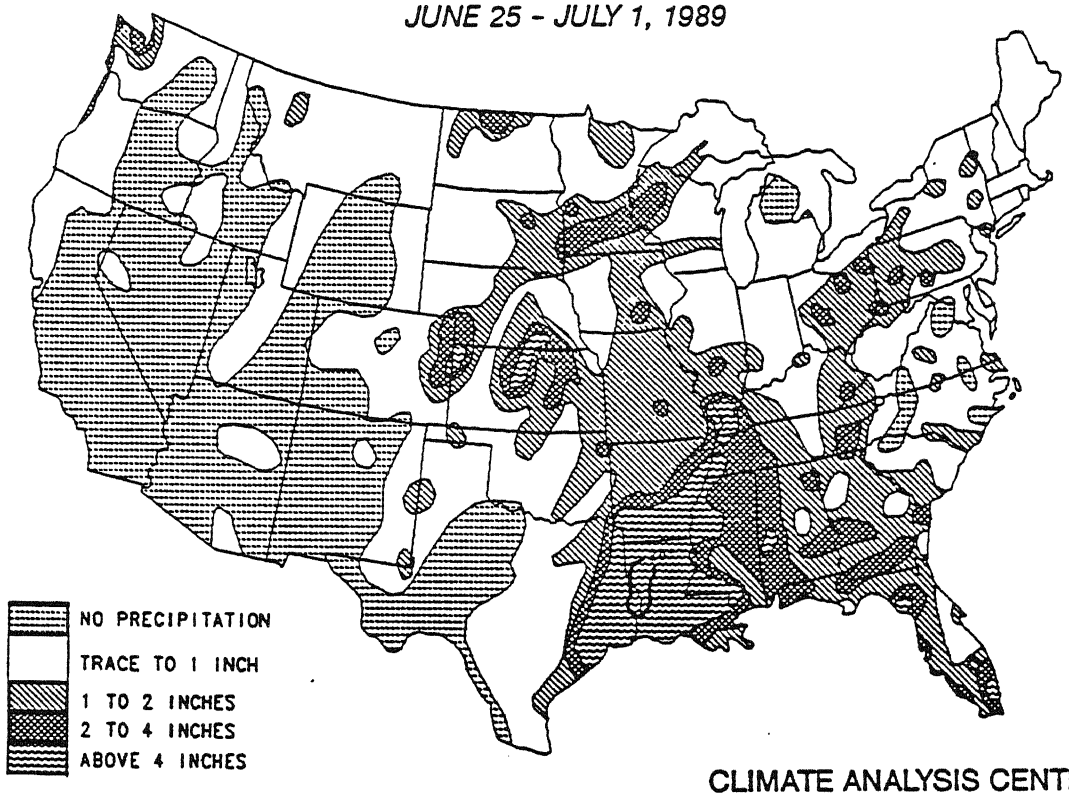
Temperatures across the lower 48 states were generally near normal. The greatest positive departures (between +4°F and +7°F) were found in southern Alaska, the northern Great Plains and upper Midwest, and in extreme northern New England (see Table 2). Highs exceeded 100°F in the desert Southwest, the southern Rockies, western Texas, and the central High Plains while readings in the nineties were common across most of the contiguous U.S. In contrast, cooler weather covered the Far West as temperatures averaged between 5°F and 9°F below normal in portions of the Great Basin and central Pacific Coast (see Table 3). Several stations in the upper Midwest and Great Lakes tied or set new daily minimum temperature records during the middle of the week as a cool Canadian high pressure center settled over the region. Persistent cloudiness and frequent rains kept temperatures slightly below normal in most of the South and Southeast.

TABLE 1. Selected stations with 3.00 or more inches of precipitation for the week.

STATION	TOTAL (INCHES)	STATION	TOTAL (INCHES)
LAKE CHARLES, LA	14.86	GREENWOOD, MS	5.45
PORT ARTHUR, TX	14.59	CAPE GIRARDEAU, MO	4.71
HOUSTON, TX	13.38	PADUCAH, KY	4.66
SHREVEPORT/BARKSDALE AFB, LA	10.74	MEMPHIS, TN	4.07
BATON ROUGE, LA	10.31	HOMESTEAD AFB, FL	4.04
LUFKIN, TX	9.82	NEW ORLEANS/MOISANT, LA	3.74
ALEXANDRIA/ENGLAND AFB, LA	9.21	GAINESVILLE, FL	3.65
SHREVEPORT, LA	9.20	JACKSON, TN	3.58
HOUSTON/WILLIAM HOBBY, TX	8.31	MILTON/WHITING NAS, FL	3.58
LAFAYETTE, LA	8.22	TALLAHASSEE, FL	3.51
HOUSTON/ELLINGTON AFB, TX	7.31	TUSCALOOSA, AL	3.37
GALVESTON, TX	6.63	WEST PALM BEACH, FL	3.25
MEMPHIS NAS, TN	5.86	MUSCLE SHOALS, AL	3.22
MIAMI, FL	5.65	PINE BLUFF, AR	3.17
RUSSELL, KS	5.59	VALDOSTA, GA	3.03
MONROE, LA	5.48	SAVANNAH, GA	3.01

OBSERVED PRECIPITATION

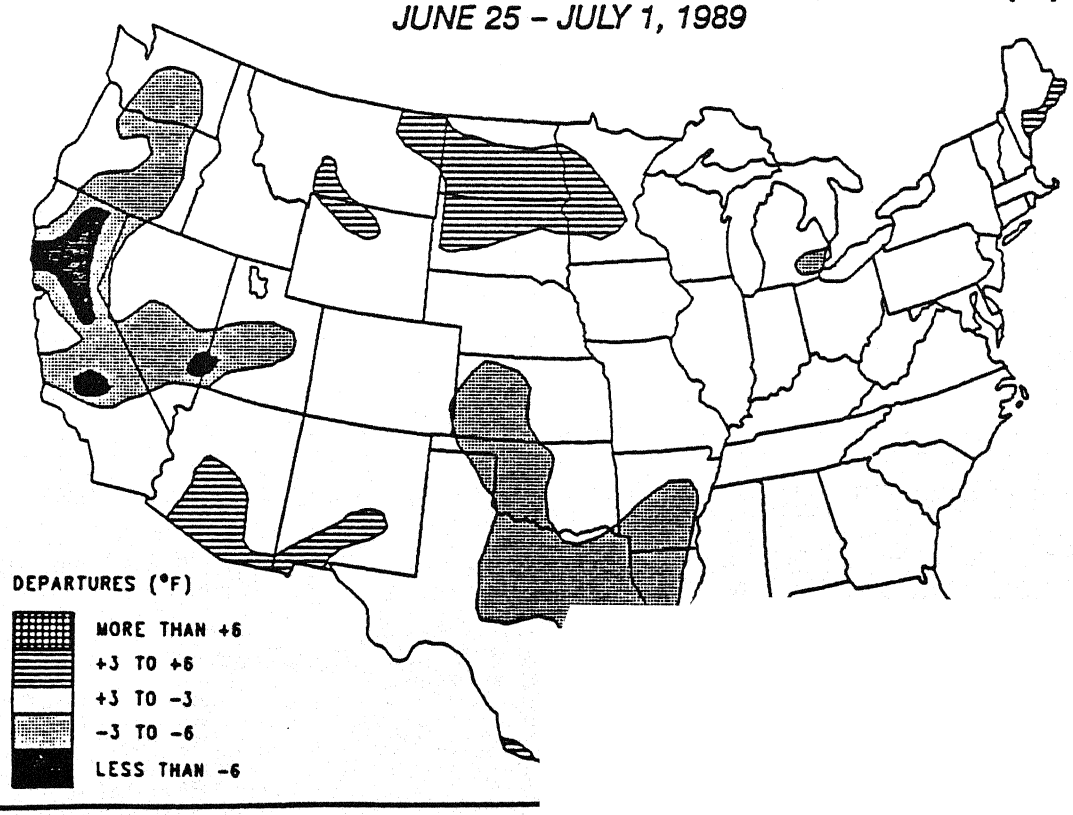
JUNE 25 - JULY 1, 1989



CLIMATE ANALYSIS CENTER / NOAA

DEPARTURE OF AVERAGE TEMPERATURE FROM NORMAL (°F)

JUNE 25 – JULY 1, 1989



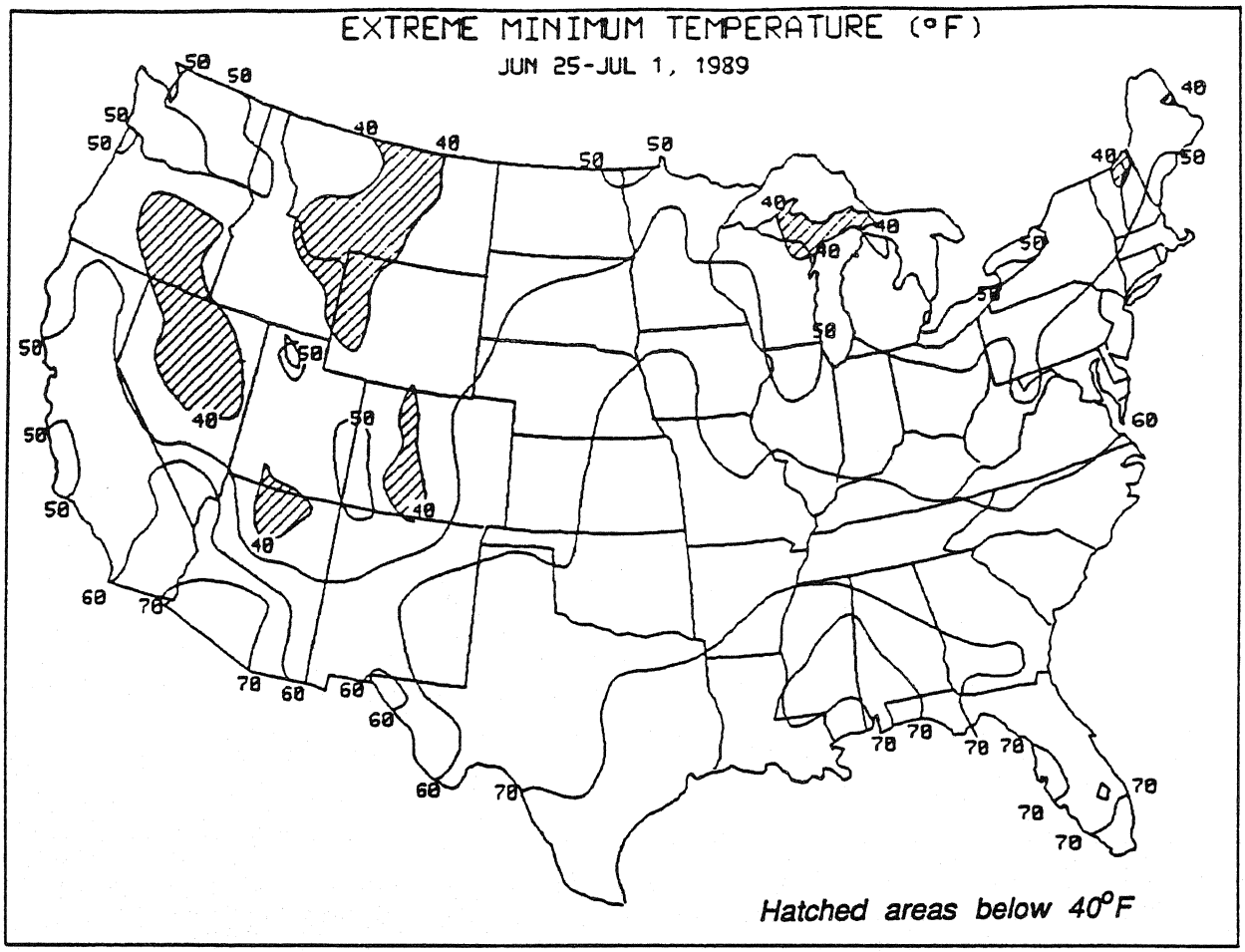


TABLE 2. Selected stations with temperatures averaging 3.0°F or more ABOVE normal for the week.

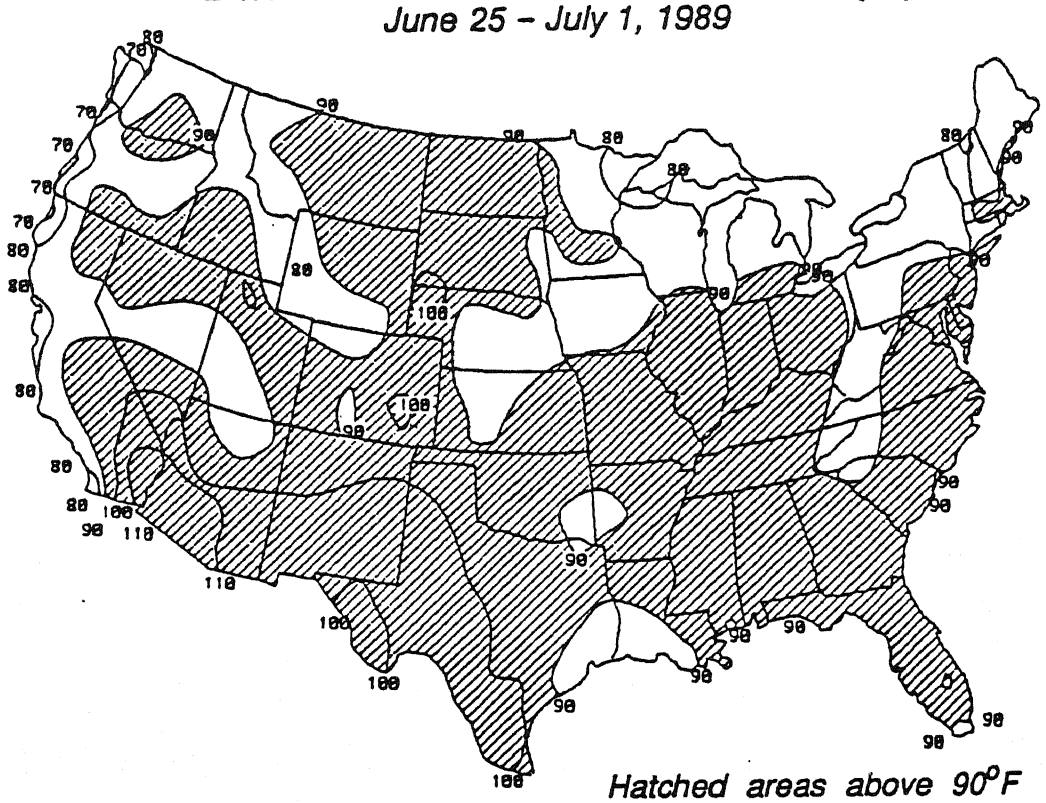
STATION	DEPARTURE (°F)	AVERAGE (°F)	STATION	DEPARTURE (°F)	AVERAGE (°F)
KODIAK, AK	+6.6	58.4	MCALLEN, TX	+3.5	87.3
VALDEZ, AK	+5.2	58.2	PIERRE, SD	+3.5	75.2
PHOENIX, AZ	+5.1	95.0	RAPID CITY, SD	+3.5	72.6
JUNEAU, AK	+4.9	59.5	WILLISTON, ND	+3.5	70.9
TALKEETNA, AK	+4.8	62.1	PORTLAND, ME	+3.3	68.9
ANCHORAGE, AK	+4.7	61.6	RUMFORD, ME	+3.3	68.4
KENAI, AK	+4.5	56.7	DICKINSON, ND	+3.2	69.3
BISMARCK, ND	+4.4	72.1	ROSWELL, NM	+3.1	83.4
JAMESTOWN, ND	+4.0	71.5	WORLAND, WY	+3.1	71.6
MCGRATH, AK	+3.9	61.6	EUREKA, CA	+3.1	58.5
CORDOVA/MILE 13, AK	+3.9	56.4	BARROW, AK	+3.1	40.1
GLENDALE/LUKE AFB, AZ	+3.6	91.8	PRESCOTT, AZ	+3.0	73.4
ALEXANDRIA, MN	+3.6	71.8	ST. CLOUD, MN	+3.0	71.2
GLASGOW, MT	+3.6	71.1	BANGOR, ME	+3.0	68.7

TABLE 3. Selected stations with temperatures averaging 3.0°F or more BELOW normal for the week.

STATION	DEPARTURE (°F)	AVERAGE (°F)	STATION	DEPARTURE (°F)	AVERAGE (°F)
	-8.9	71.4	DODGE CITY, KS	-4.1	73.9
	-7.2	74.2	PALACIOS, TX	-4.1	79.1
	-6.0	67.6	GALVESTON, TX	-3.9	78.8
	-5.4	76.8	SAN ANGELO, TX	-3.9	79.2
	-5.2	76.9	BURNS, OR	-3.8	60.9
	-5.1	65.4	ENID/VANCE AFB, OK	-3.8	77.0
	-5.1	77.4	WICHITA FALLS, TX	-3.8	79.8
	-5.0	76.9	DELTA, UT	-3.5	68.2
	4.8	66.7	HOBART, OK	-3.5	78.4
	4.5	76.4	LOVELOCK, NV	-3.4	67.6
	4.4	78.3	YAKIMA, WA	-3.3	64.1
	4.3	65.6	COLLEGE STATION, TX	-3.3	79.7
	4.3	73.7	PINE BLUFF, AR	-3.2	78.1
	4.2	75.5	FRESNO, CA	-3.0	75.1
		80.0	DALLAS/FORT WORTH, TX	-3.0	81.0

EXTREME MAXIMUM TEMPERATURE (°F)

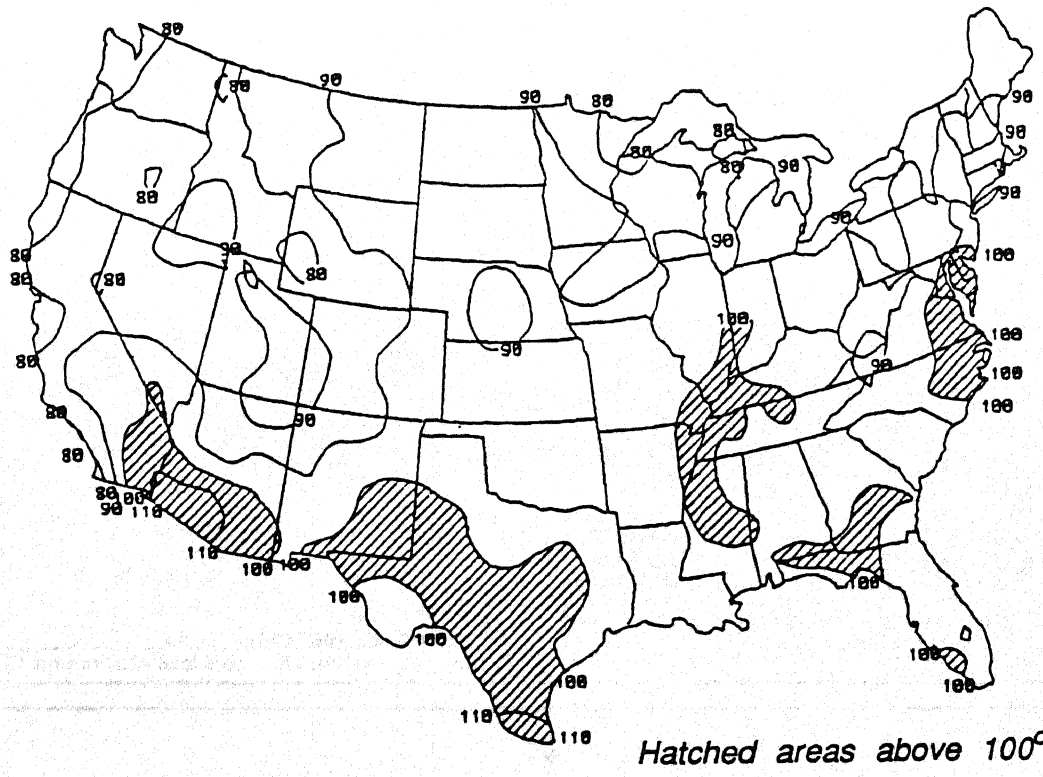
June 25 – July 1, 1989



Much of the Southwest experienced highs above 100°F while readings in the nineties prevailed across most of the remainder of the nation (top). Hot and humid weather produced dangerous apparent temperatures in parts of the East and the Mississippi Valley (bottom).

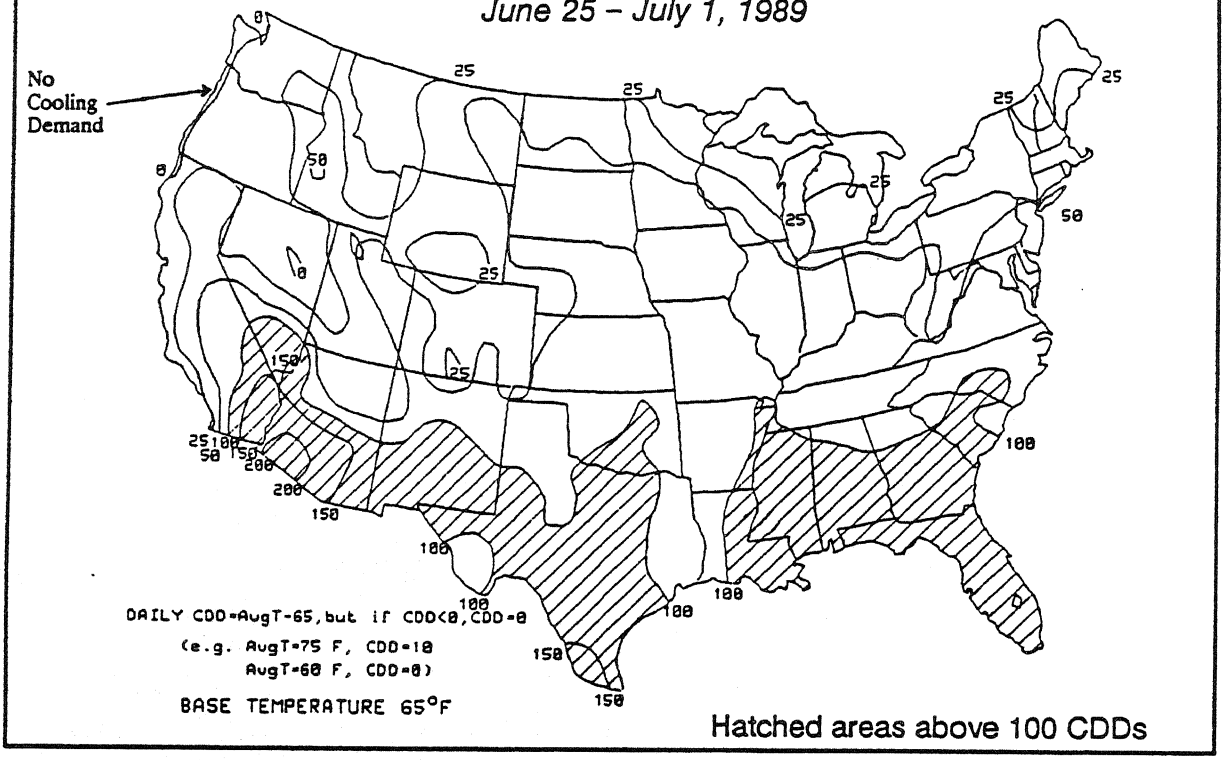
EXTREME APPARENT TEMPERATURE (°F)

June 25 – July 1, 1989



WEEKLY TOTAL COOLING DEGREE-DAYS

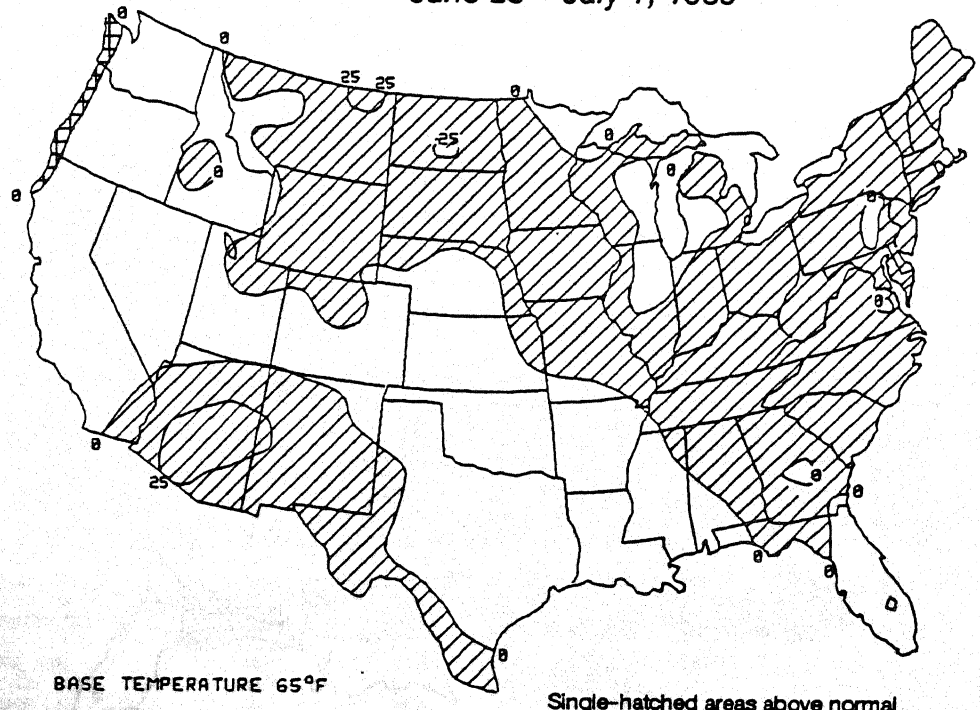
June 25 – July 1, 1989



Weekly total CDD's exceeded 100 across much of the South (top). Only small areas in Montana, North Dakota, New Mexico, and Arizona had more than 25 CDD's above normal last week (bottom).

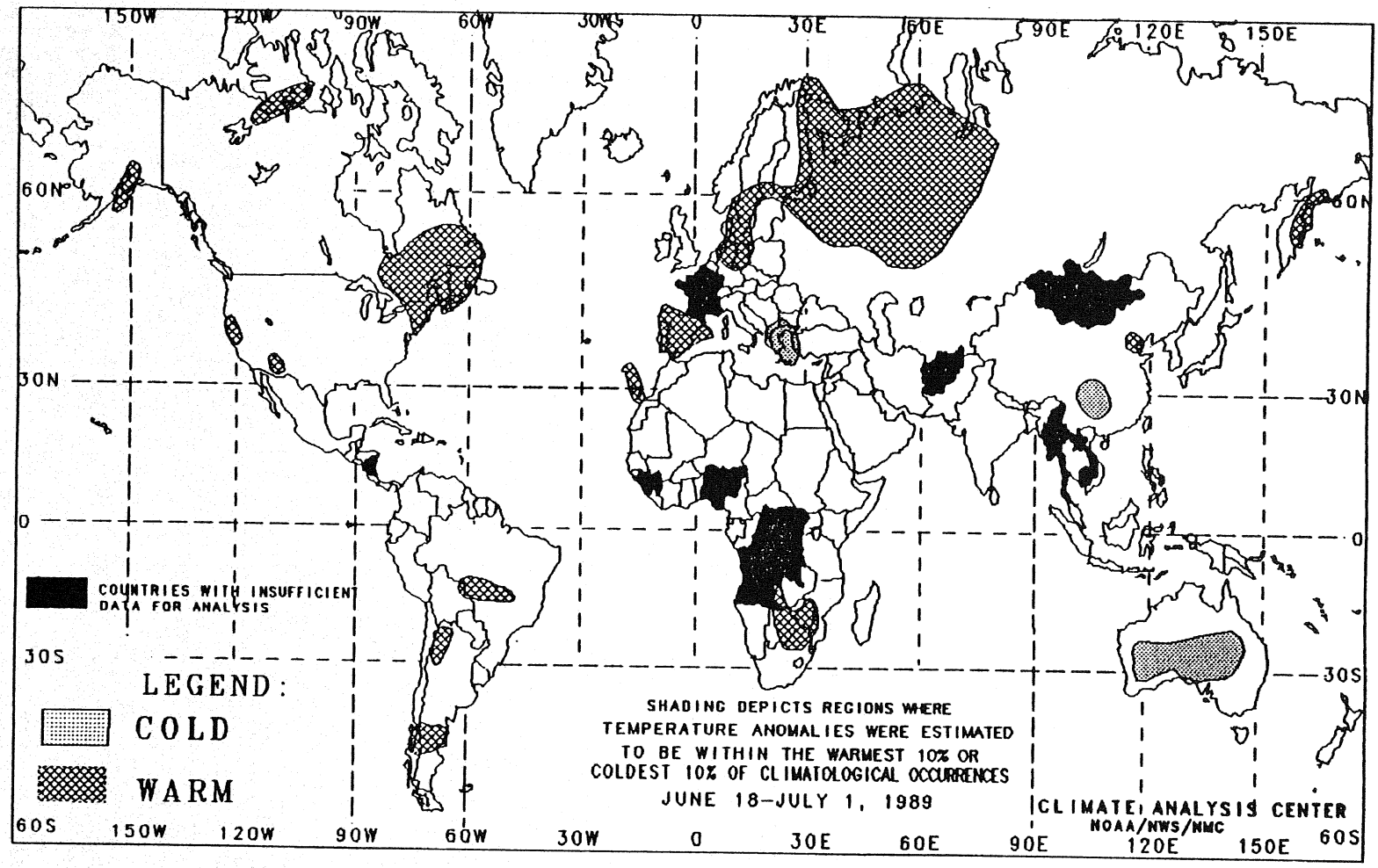
WEEKLY DEPARTURE FROM NORMAL CDD

June 25 – July 1, 1989



GLOBAL TEMPERATURE ANOMALIES

2 WEEKS



The anomalies on this chart are based on approximately 2500 observing stations for which at least 13 days of temperature observations were received from synoptic reports. Many stations do not operate on a twenty-four hour basis so many night time observations are not taken. As a result of these missing observations the estimated minimum temperature may have a warm bias. This in turn may have resulted in an overestimation of the extent of some warm anomalies.

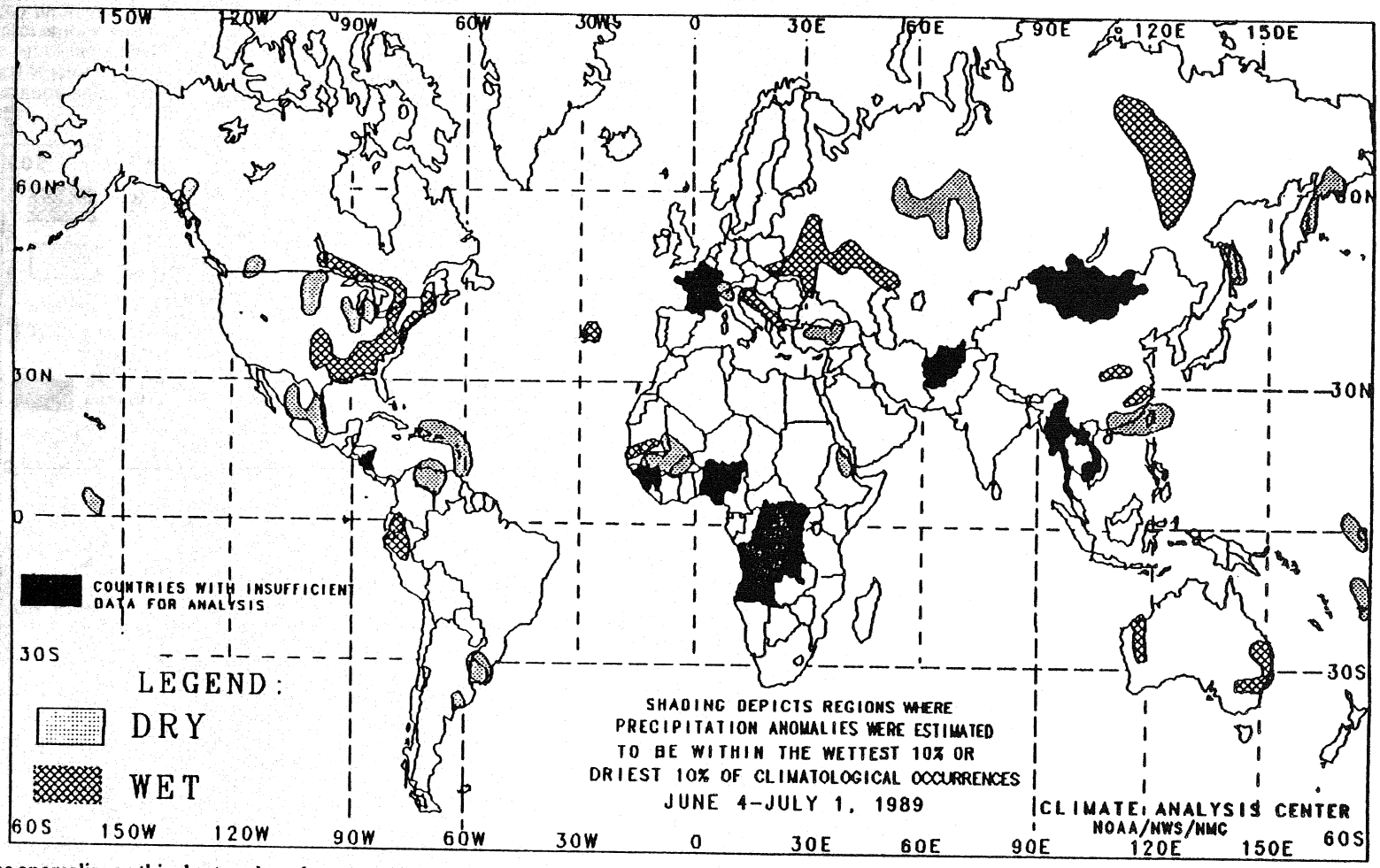
Temperature anomalies are not depicted unless the magnitude of temperature departures from normal exceeds 1.5°C.

In some regions, insufficient data exist to determine the magnitude of anomalies. These regions are located in parts of tropical Africa, southwestern Asia, interior equatorial South America, and along the Arctic Coast. Either current data are too sparse or incomplete for analysis, or historical data are insufficient for determining percentiles, or both. No attempt has been made to estimate the magnitude of anomalies in such regions.

This chart shows general areas of two week temperature anomalies. Caution must be used in relating it to local conditions, especially in mountainous regions.

GLOBAL PRECIPITATION ANOMALIES

4 WEEKS



The anomalies on this chart are based on approximately 2500 observing stations for which at least 27 days of precipitation observations (including zero amounts) were received or estimated from synoptic reports. As a result of both missing observations and the use of estimates from synoptic reports (which are conservative), a dry bias in the total precipitation amount may exist for some stations used in this analysis. This in turn may have resulted in an overestimation of the extent of some dry anomalies.

In climatologically arid regions where normal precipitation for the four week period is less than 20 mm, dry anomalies are not depicted. Additionally, wet anomalies for such arid regions are not depicted unless the total four week precipitation exceeds 50 mm.

In some regions, insufficient data exist to determine the magnitude of anomalies. These regions are located in parts of tropical Africa, southwestern Asia, interior equatorial South America, and along the Arctic Coast. Either current data are too sparse or incomplete for analysis, or historical data are insufficient for determining percentiles, or both. No attempt has been made to estimate the magnitude of anomalies in such regions.

The chart shows general areas of four week precipitation anomalies. Caution must be used in relating it to local conditions, especially in mountainous regions.